

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2017/0079068 A1

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Mar. 16, 2017 (43) **Pub. Date:**

(54) FAIRNESS IN WIRELESS NETWORKS WITH ADAPTIVE CLEAR CHANNEL ASSESSMENT THRESHOLDS

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(21) Appl. No.: 15/248,029

(22) Filed: Aug. 26, 2016

Related U.S. Application Data

(60) Provisional application No. 62/218,183, filed on Sep. 14, 2015.

Publication Classification

Int. Cl. (51)H04W 74/08 (2006.01)

(52)U.S. Cl. CPC H04W 74/0816 (2013.01); H04W 84/12 (2013.01)

(57)ABSTRACT

When contending for access to a radio channel (for example CSMA/CA in Wi-Fi), an apparatus selects a first clear channel assessment (CCA) threshold that is higher than a minimum; determines to temporarily use a second CCA threshold that is lower than the first CCA threshold; and based on this determination it selects the second CCA threshold for a specified time period. In one embodiment this determination is based on the apparatus' use of a spectrum relative to a threshold usage level which may be calculated as a number of successful transmissions by the apparatus on the spectrum over a predefined time period; and/or as a deferring time experienced by the apparatus with respect to the spectrum over a predefined time period. In an embodiment the specified time period comprises a backoff time, and the determination to temporarily use the second CCA threshold is triggered by a periodic timer.

CASE 1: NO STAs ARE WAITING (i.e., UNFAIRNESS DIDN,T EXIST)

